

CLAIMS:

1. A fixing device for fixing an image formed on a recording medium, comprising:
 - a fixing member arranged on a recording medium conveying path;
 - a pressing member configured to press-contact the fixing member;
 - a heat source configured to heat the fixing member;
 - a storage device configured to supply power to the heat source; and
 - a control device configured to change an amount of power supplied from the storage device to the heat source based on an elapsed time since a start of image formation.
2. The fixing device according to claim 1, further comprising a temperature detecting device configured to detect a temperature of the fixing member,
 - wherein the control device is configured to compare the temperature of the fixing member with a reference temperature and to change the amount of power supplied from the storage device to the heat source based on a comparison result, and
 - wherein the control device is configured to change the reference temperature based on the elapsed time.
3. A fixing device for fixing an image formed on a recording medium, comprising:
 - a fixing member arranged on a recording medium conveying path;
 - a pressing member configured to press-contact the fixing member;
 - a heat source configured to heat the fixing member;
 - a storage device configured to supply power to the heat source; and
 - a control device configured to change an amount of power supplied from the storage device to the heat source based on a number of recording media on which images are formed since a start of image formation.
4. A fixing device for fixing an image formed on a recording medium, comprising:
 - a fixing member arranged on a recording medium conveying path;
 - a pressing member configured to press-contact the fixing member;
 - a heat source configured to heat the fixing member;
 - a storage device configured to supply power to the heat source;
 - a temperature detecting device configured to detect a local ambient temperature in a vicinity of the fixing member; and

a control device configured to change an amount of power supplied from the storage device to the heat source based on the local ambient temperature.

5. A fixing device for fixing an image formed on a recording medium, comprising:
a fixing member arranged on a recording medium conveying path;
a pressing member configured to press-contact the fixing member;
a heat source configured to heat the fixing member;
a storage device configured to supply power to the heat source; and
a control device configured to change an amount of power supplied from the storage device to the heat source based on a difference between a temperature of the fixing member and a temperature of the pressing member.

6. A fixing device for fixing an image formed on a recording medium, comprising:
a fixing member arranged on a recording medium conveying path;
a pressing member configured to press-contact the fixing member;
a heat source configured to heat the fixing member;
a storage device configured to supply power to the heat source;
a temperature detecting device configured to detect a temperature of the pressing member; and

a control device configured to change an amount of power supplied from the storage device to the heat source based on the temperature of the pressing member.

7. A fixing device for fixing an image formed on a recording medium, comprising:
a fixing member arranged on a recording medium conveying path;
a pressing member configured to press-contact the fixing member;
a heat source configured to heat the fixing member;
a storage device configured to supply power to the heat source;
a temperature estimating device configured to estimate a temperature of the pressing member; and

a control device configured to change an amount of power supplied from the storage device to the heat source based on the temperature of the pressing member estimated by the temperature estimating device.

8. The fixing device according to claim 7, wherein the temperature estimating device is configured to estimate the temperature of the pressing member based on at least one of an elapsed time since a start of image formation, a number of recording media on which images are formed since the start of image formation, a local ambient temperature in a vicinity of the fixing member, and a change of temperature of the fixing member.

9. The fixing device according to claim 1, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

10. The fixing device according to claim 3, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

11. The fixing device according to claim 4, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

12. The fixing device according to claim 5, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

13. The fixing device according to claim 6, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

14. The fixing device according to claim 7, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

15. The fixing device according to claim 1, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

16. The fixing device according to claim 3, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

17. The fixing device according to claim 4, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

18. The fixing device according to claim 5, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

19. The fixing device according to claim 6, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

20. The fixing device according to claim 7, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

21. An image forming apparatus, comprising:
an image forming device configured to form an image on a recording medium; and
a fixing device configured to fix the image formed on the recording medium, the fixing device comprising,

a fixing member arranged on a recording medium conveying path;
a pressing member configured to press-contact the fixing member;
a heat source configured to heat the fixing member;
a storage device configured to supply power to the heat source; and
a control device configured to change an amount of power supplied from the storage device to the heat source based on an elapsed time since a start of image formation.

22. The image forming apparatus according to claim 21, further comprising a temperature detecting device configured to detect a temperature of the fixing member, wherein the control device is configured to compare the temperature of the fixing member with a reference temperature and to change the amount of power supplied from the storage device to the heat source based on a comparison result, and
wherein the control device is configured to change the reference temperature based on the elapsed time.

23. An image forming apparatus, comprising:
an image forming device configured to form an image on a recording medium; and
a fixing device configured to fix the image formed on the recording medium, the
fixing device comprising,
a fixing member arranged on a recording medium conveying path;
a pressing member configured to press-contact the fixing member;
a heat source configured to heat the fixing member;
a storage device configured to supply power to the heat source; and
a control device configured to change an amount of power supplied from the
storage device to the heat source based on a number of recording media on which
images are formed since a start of image formation.

24. An image forming apparatus, comprising:
an image forming device configured to form an image on a recording medium; and
a fixing device configured to fix the image formed on the recording medium, the
fixing device comprising,
a fixing member arranged on a recording medium conveying path;
a pressing member configured to press-contact the fixing member;
a heat source configured to heat the fixing member;
a storage device configured to supply power to the heat source;
a temperature detecting device configured to detect a local ambient
temperature in a vicinity of the fixing member; and
a control device configured to change an amount of power supplied from the
storage device to the heat source based on the local ambient temperature.

25. An image forming apparatus, comprising:
an image forming device configured to form an image on a recording medium; and
a fixing device configured to fix the image formed on the recording medium, the
fixing device comprising,
a fixing member arranged on a recording medium conveying path;
a pressing member configured to press-contact the fixing member;
a heat source configured to heat the fixing member;
a storage device configured to supply power to the heat source; and

a control device configured to change an amount of power supplied from the storage device to the heat source based on a difference between a temperature of the fixing member and a temperature of the pressing member.

26. An image forming apparatus, comprising:

an image forming device configured to form an image on a recording medium; and

a fixing device configured to fix the image formed on the recording medium, the fixing device comprising,

- a fixing member arranged on a recording medium conveying path;
- a pressing member configured to press-contact the fixing member;
- a heat source configured to heat the fixing member;
- a storage device configured to supply power to the heat source;
- a temperature detecting device configured to detect a temperature of the pressing member; and

a control device configured to change an amount of power supplied from the storage device to the heat source based on the temperature of the pressing member.

27. An image forming apparatus, comprising:

an image forming device configured to form an image on a recording medium; and

a fixing device configured to fix the image formed on the recording medium, the fixing device comprising,

- a fixing member arranged on a recording medium conveying path;
- a pressing member configured to press-contact the fixing member;
- a heat source configured to heat the fixing member;
- a storage device configured to supply power to the heat source;
- a temperature estimating device configured to estimate a temperature of the pressing member; and

a control device configured to change an amount of power supplied from the storage device to the heat source based on the temperature of the pressing member estimated by the temperature estimating device.

28. The image forming apparatus according to claim 27, wherein the temperature estimating device is configured to estimate the temperature of the pressing member based on at least one of an elapsed time since a start of image formation, a number of recording media

on which images are formed since the start of image formation, a local ambient temperature in a vicinity of the fixing member, and a change of temperature of the fixing member.

29. The image forming apparatus according to claim 21, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

30. The image forming apparatus according to claim 23, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

31. The image forming apparatus according to claim 24, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

32. The image forming apparatus according to claim 25, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

33. The image forming apparatus according to claim 26, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

34. The image forming apparatus according to claim 27, wherein the control device is configured to change the amount of power supplied from the storage device to the heat source by shutting off and turning on a supply of power from the storage device to the heat source.

35. The image forming apparatus according to claim 21, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

36. The image forming apparatus according to claim 23, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

37. The image forming apparatus according to claim 24, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

38. The image forming apparatus according to claim 25, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

39. The image forming apparatus according to claim 26, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

40. The image forming apparatus according to claim 27, wherein the storage device is an auxiliary power source configured to be charged by a commercial power supply.

41. A method of fixing an image formed on a recording medium, comprising:
supplying power to a heat source from a storage device;
heating a fixing member by the heat source;
passing the recording medium having the image through a nip part between the fixing member and a pressing member; and
changing an amount of power supplied from the storage device to the heat source based on an elapsed time since a start of image formation.

42. A method of fixing an image formed on a recording medium, comprising:
supplying power to a heat source from a storage device;
heating a fixing member by the heat source;
passing the recording medium having the image through a nip part between the fixing member and a pressing member; and
changing an amount of power supplied from the storage device to the heat source based on a number of recording media on which images are formed since a start of image formation.

43. A method of fixing an image formed on a recording medium, comprising:
supplying power to a heat source from a storage device;
heating a fixing member by the heat source;
passing the recording medium having the image through a nip part between the fixing member and a pressing member;

detecting a local ambient temperature in a vicinity of the fixing member; and
changing an amount of power supplied from the storage device to the heat source
based on the local ambient temperature.

44. A method of fixing an image formed on a recording medium, comprising:
supplying power to a heat source from a storage device;
heating a fixing member by the heat source;
passing the recording medium having the image through a nip part between the fixing
member and a pressing member; and
changing an amount of power supplied from the storage device to the heat source
based on a difference between a temperature of the fixing member and a temperature of the
pressing member.

45. A method of fixing an image formed on a recording medium, comprising:
supplying power to a heat source from a storage device;
heating a fixing member by the heat source;
passing the recording medium having the image through a nip part between the fixing
member and a pressing member;
detecting a temperature of the pressing member; and
changing an amount of power supplied from the storage device to the heat source
based on the temperature of the pressing member.

46. A method of fixing an image formed on a recording medium, comprising:
supplying power to a heat source from a storage device;
heating a fixing member by the heat source;
passing the recording medium having the image through a nip part between the fixing
member and a pressing member;
estimating a temperature of the pressing member; and
changing an amount of power supplied from the storage device to the heat source
based on the estimated temperature of the pressing member.

47. A method of fixing an image formed on a recording medium, comprising:
supplying power to a heat source from a storage device;
heating a fixing member by the heat source;

passing the recording medium having the image through a nip part between the fixing member and a pressing member;

estimating an amount of heat transferred from the fixing member to the pressing member; and

changing an amount of power supplied from the storage device to the heat source based on the estimated amount of heat transferred from the fixing member to the pressing member.

48. The method according to claim 41, further comprising, charging the storage device by a commercial power source.

49. The method according to claim 42, further comprising, charging the storage device by a commercial power source.

50. The method according to claim 43, further comprising, charging the storage device by a commercial power source.

51. The method according to claim 44, further comprising, charging the storage device by a commercial power source.

52. The method according to claim 45, further comprising, charging the storage device by a commercial power source.

53. The method according to claim 46, further comprising, charging the storage device by a commercial power source.

54. The method according to claim 47, further comprising, charging the storage device by a commercial power source.

55. An image forming apparatus, comprising:

means for forming an image on a recording medium; and

means for fixing the image formed on the recording medium, the means for fixing comprising,

a fixing member arranged on a recording medium conveying path;

means for press-contacting the fixing member;
means for heating the fixing member;
means for supplying power to the means for heating; and
means for controlling an amount of power supplied from the means for supplying power to the means for heating based on an elapsed time since a start of image formation.

56. The image forming apparatus according to claim 55, further comprising means for detecting a temperature of the fixing member,

wherein the means for controlling compares the temperature of the fixing member with a reference temperature and changes the amount of power supplied from the means for supplying power to the means for heating based on a comparison result, and

wherein the means for controlling changes the reference temperature based on the elapsed time since the start of image formation.

57. An image forming apparatus, comprising:

means for forming an image on a recording medium; and

means for fixing the image formed on the recording medium, the means for fixing comprising,

a fixing member arranged on a recording medium conveying path;

means for press-contacting the fixing member;

means for heating the fixing member;

means for supplying power to the means for heating; and

means for controlling an amount of power supplied from the means for supplying power to the means for heating based on a number of recording media on which images are formed since a start of image formation.

58. An image forming apparatus, comprising:

means for forming an image on a recording medium; and

means for fixing the image formed on the recording medium, the means for fixing comprising,

a fixing member arranged on a recording medium conveying path;

means for press-contacting the fixing member;

means for heating the fixing member;

means for supplying power to the means for heating;
means for detecting a local ambient temperature in a vicinity of the fixing member; and
means for controlling an amount of power supplied from the means for supplying power to the means for heating based on the local ambient temperature.

59. An image forming apparatus, comprising:
means for forming an image on a recording medium; and
means for fixing the image formed on the recording medium, the means for fixing comprising,

a fixing member arranged on a recording medium conveying path;
means for press-contacting the fixing member;
means for heating the fixing member;
means for supplying power to the means for heating; and
means for controlling an amount of power supplied from the means for supplying power to the means for heating based on a difference between a temperature of the fixing member and a temperature of the means for press-contacting.

60. An image forming apparatus, comprising:
means for forming an image on a recording medium; and
means for fixing the image formed on the recording medium, the means for fixing comprising,

a fixing member arranged on a recording medium conveying path;
means for press-contacting the fixing member;
means for heating the fixing member;
means for supplying power to the means for heating;
means for detecting a temperature of the means for press-contacting; and
means for controlling an amount of power supplied from the means for supplying power to the means for heating based on the temperature of the means for press-contacting.

61. An image forming apparatus, comprising:
means for forming an image on a recording medium; and

means for fixing the image formed on the recording medium, the means for fixing comprising,

 a fixing member arranged on a recording medium conveying path;
 means for press-contacting the fixing member;
 means for heating the fixing member;
 means for supplying power to the means for heating;
 means for estimating a temperature of the means for press-contacting; and
 means for changing an amount of power supplied from the means for
 supplying power to the means for heating based on the temperature of the means for
 press-contacting estimated by the means for estimating.

62. The image forming apparatus according to claim 61, wherein the means for estimating estimates the temperature of the means for press-contacting based on at least one of an elapsed time since a start of image formation, a number of recording media on which images are formed since the start of image formation, a local ambient temperature in a vicinity of the fixing member, and a change of temperature of the fixing member.